

INFORMATION CONCERNING 2016 CLEAN WATER ACT SECTIONS 303(d), 305(b), AND 314 INTEGRATED REPORTING AND LISTING DECISIONS

The information provided in this document is intended to assist States and Regions as they prepare and review the 2016 Integrated Reports (IR), in accordance with Clean Water Act (CWA) Sections 303(d), 305(b), and 314. This memorandum focuses on the following topics: 1) implementation of the CWA 303(d) Program Vision; 2) revisiting potential approaches for the identification of nutrient-impaired waters based on narrative nutrient water quality criteria and direct evidence of failure to support designated uses; 3) implementing the Water Quality Framework, including the Assessment and Total Maximum Daily Load (TMDL) Tracking and Implementation System (ATTAINS) redesign and reporting of statewide statistical survey data; 4) providing information about the update to the data in the variable portion of the Fiscal Year 2017 Clean Water Act Section 106 grant allocation formula; and 5) clarifying how to assess and assign waters to Category 4C.

1. Implementation of the Clean Water Act 303(d) Program Vision

In December 2013, EPA announced a new framework for implementing the CWA Section 303(d) Program—*A Long-Term Vision for Assessment, Restoration, and Protection under the Clean Water Act Section 303(d) Program*.¹ Sharing a belief that the time was ripe to improve implementation of the CWA 303(d) Program, State and EPA program managers began a collaborative process in August 2011 to develop a new framework for managing program responsibilities, which is now articulated in the Vision and supported by the Association of Clean Water Administrators.

The Vision, as supplemented by today's additional information, is not a rule or regulation. It does not impose any binding legal requirements on EPA, the States, or other stakeholders, and it does not alter CWA 303(d) regulatory obligations to identify impaired or threatened waters and develop TMDLs for such waters. The Vision does, however, encourage States to develop tailored strategies to implement their CWA 303(d) Program responsibilities in the context of their overall water quality goals and individual State priorities.

Recognizing each State is unique, EPA expects that States will vary in the extent to which and how they implement the goals of the Vision, depending on particular circumstances and water quality goals of the State. To support State and EPA discussions on re-orienting CWA 303(d) Program responsibilities consistent with the Vision, EPA is providing additional information for States to consider when implementing the Prioritization, Engagement, and Alternative Goals. EPA and States jointly identified these topics as warranting further clarification to promote timely implementation of the Vision and submittal and review of States' 2016 Integrated Reports. EPA anticipates working closely with the States on these issues as States move forward with developing their Integrated Reports.

¹ http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/upload/vision_303d_program_dec_2013.pdf. See also <http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/upload/memo.pdf>, and "Question and Answers" at http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/upload/acwa_qa.pdf.

Prioritization Goal

Long-term Prioritization from 2016 to 2022

Consistent with the Vision, EPA expects each State to identify by 2016 their long-term CWA 303(d) Program priorities through Fiscal Year (FY) 2022 in the context of the State's broader overall water quality goals. The Vision contemplates that this long-term prioritization process will be focused on identifying watersheds or individual waters for priority restoration and protection activities, taking into consideration how CWA 303(d)-related activities could collectively help achieve a State's broader overall water quality goals. The State CWA 303(d) prioritization provides a framework to focus the location and timing of the development of TMDLs, and alternative restoration and protection plans, in relation to other planning and implementation activities that may already exist in the priority watersheds or waters. As such, the State prioritization is a foundation to guide how the State implements CWA 303(d) program responsibilities and requirements, which remain unchanged. States have flexibility in how they define their priorities and may use a variety of ways to describe these priorities, which include:

- by geographic units: assessment units, watersheds, ecoregions, or basins;
- by pollutants; or,
- by designated uses.

Regardless of the way a State defines its priorities, the priorities should be articulated in a manner that allows them to be linked to specific assessment units.

Setting long-term CWA 303(d) priorities from FY 2016 to FY 2022 will afford States an opportunity to strategically focus their efforts and demonstrate progress over time in achieving environmental results. As such, the long-term priorities are not expected to substantially change from FY 2016 to FY 2022. However, EPA recognizes that some adjustments may need to be made due to unforeseen circumstances or planning processes.² In addition, although the new Vision calls for States to identify their priorities through FY 2022, some States may choose to establish a framework that allows them to identify priorities beyond FY 2022.

Additionally, CWA 303(d) prioritization affords the State an opportunity to integrate CWA 303(d) Program priorities with other water quality programs to achieve its overall water quality goals. These include State water quality standards (WQS), monitoring, CWA 319, NPDES, source water protection and conservation programs, among others. As noted in the Vision:

² As part of reporting progress in implementing the CWA 303d Program Vision, EPA and States developed new performance measures WQ-27 and WQ-28. See WQ-27 and WQ-28 (available at http://water.epa.gov/resource_performance/planning/FY-2015-National-Water-Program-Guidance.cfm). The associated computational guidance documents (currently in draft) for these measures reflect how to incorporate changes in State priorities between 2016 and 2022. In 2015 or 2016, States are expected to identify their priority areas, for which a baseline and 2022 target for TMDLs or alternative restoration approaches for impaired waters, or protection approaches for unimpaired waters, will be established for the purposes of the WQ-27 program measure. States are encouraged to keep changes to their priority areas to a minimum to track progress toward the 2022 target. However, if a State changes its priority areas before 2022, the measure WQ-27's baseline and 2022 targets would need to be updated to reflect these changes. Before changing their priority areas, States are encouraged to instead first consider reporting activities outside of priority areas in the complementary metric of WQ-28.

The CWA 303(d) Program provides an integrating function because it translates state water quality standards into pollution reduction targets for the point source permitting and nonpoint sources management programs as well as other programs outside the CWA. Linking the CWA 303(d) Program priorities with those of other programs can aid in strategically focusing limited State resources to address priority waters through water quality assessments, TMDL or alternative approaches, water quality protection strategies, implementation actions and follow-up monitoring. Establishing CWA 303(d) Program priorities will lead to more efficient and effective program management, yielding faster progress toward water quality improvement and protection.

Having CWA 303(d) Program priorities informed by data and information from other relevant programs would help achieve and demonstrate environmental results over time. For example, integration with water quality monitoring programs could lay the groundwork for gathering the needed data to assess baseline conditions in priority waters, to develop TMDLs or other restoration/protection plans, or to determine progress in restoring or protecting priority waters. Integration with other programs could also inform the selection of the approaches that afford the best opportunity to restore or protect water quality, as well as facilitate the implementation of the pollutant reduction or protection goals of the selected approaches.

Appendix A provides some factors States are encouraged to consider when setting long-term priorities under the CWA 303(d) Program. Recognizing that there is flexibility in how CWA 303(d) Program responsibilities are implemented consistent with existing statutory and regulatory authorities, EPA will work closely with States as they identify their long-term priorities that reflect a meaningful plan or roadmap on how best to meet their on-going CWA 303(d) Program requirements.

Consistent with the new Vision, the Integrated Report submitted by States for the 2016 Integrated Reporting cycle should include, or reference, the State's long-term priorities for the CWA 303(d) program from FY 2016 to FY 2022 and the associated rationale used to set these long-term priorities. The rationale should explain how the State arrived at the long-term priorities; and, to the extent feasible, it should discuss where the State plans to develop future TMDLs, alternative restoration approaches, or protection plans and the extent to which they already exist in priority watersheds or waters. States with priorities extending beyond FY 2022 are encouraged to also include, or reference, such information.

Although State's long-term priorities should be included, or referenced, in the 2016 Integrated Report, EPA's decision on the State's CWA 303(d) list will not include action on the State's long-term priorities identified under the Vision.

Importance of Engaging the Public in the State's Long-term Prioritization Process

Consistent with the Vision's Engagement Goal, States are encouraged to engage their general public and stakeholders in the establishment of CWA 303(d)-related priorities. EPA also encourages States to articulate as part of its rationale supporting the prioritization, how input from the public was considered and addressed.

EPA recognizes that States have used, and will continue to use, different methods to engage the public. For example, depending on the timing of a State's process for developing its 2016 Integrated Report, some States may choose to use the Integrated Report public notice process as a means to engage the public on establishing CWA 303(d) priorities. Other States may choose to engage the public on their CWA 303(d) priorities through a process separate from the Integrated Report. Whichever process to engage the public is used, EPA encourages States to conduct it in a manner such that States are prepared to report on EPA's CWA 303(d) program measure in FY 2016 and to include or reference CWA 303(d) priorities and associated rationale in the 2016 Integrated Report due on April 1, 2016.

Distinction between the Vision Long-term Priorities and the Required Priority Ranking of Listed Waters

As noted above, EPA expects that the long-term priorities for the CWA 303(d) Program for FY 2016 to FY 2022 and associated rationale would be included in the Integrated Report starting in 2016. Thus, EPA expects States to include the following elements in the 2016 Integrated Reports:

- the long-term priorities from FY 2016 to FY 2022 and the associated prioritization rationale (or references to such priorities and associated rationale);
- priority ranking for all listed waters still requiring TMDLs (i.e., all waterbody/pollutant combinations on the CWA 303(d) list), taking into account the severity of the pollution and the uses to be made of such waters and including the identification of waters targeted for TMDL development within the next two years of the CWA 303(d) list (as required by 40 CFR §130.7(b)(4)).

As illustrated below, EPA expects that the required priority ranking, including the two-year TMDL development schedule, is related to and likely to be consistent with the Vision long-term priorities from FY 2016 to FY 2022. For example, CWA 303(d) listed waters assigned a high priority ranking for TMDL development are likely to be included in the Vision long-term priorities. Additionally, where alternative restoration approaches are likely to be pursued for some CWA 303(d) listed waters identified as a long-term priority, those waters might be assigned a lower priority ranking for TMDL development in the near-term.-

Long-term Priorities Consistent with the Vision

- Will not likely include all listed waters
- Includes high priorities for TMDL development; and, may also include alternative restoration or protection approaches
- Would likely be a subset of the required priority ranking for TMDL development, if state priorities only focus on TMDL development
- Not required, but the basis for program measure

Required Priority Ranking in CWA 303(d)

- Ranking of all listed waters (e.g., high, medium, low priorities) based on severity and use
- Only focuses on ranking of waters for TMDL development, including a two-year TMDL development schedule
- Waters ranked high for TMDL development are likely to be part of Vision priorities
- Some waters ranked low for TMDL development may still be part of the Vision priorities for alternative restoration approaches
- Required by regulation biennially - 40 CFR 130.7(b)(4)

Alternatives Goal

As emphasized in the Vision, the statutory and regulatory obligations to develop TMDLs for waters identified on States' CWA 303(d) lists remain unchanged, and TMDLs will remain the most dominant program analytic and informational tool for addressing such waters. However, EPA recognizes that under certain circumstances there are alternative restoration approaches that may be more immediately beneficial or practicable to achieve water quality standards than pursuing the TMDL approach in the near future. An alternative restoration approach is a plan, or description of actions, with a schedule and milestones, pursued in the near-term that in their totality are expected to achieve water quality standards more rapidly.

With the exception of impaired waters assigned to Category 4b³ and Category 4c,⁴ impaired

³ For more information on Category 4b, see "Information Concerning 2008 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions," available at http://www.epa.gov/owow/tmdl/2008_ir_memorandum.html.

⁴ For more information on appropriate placement of waters impaired by pollution under Category 4c, see "Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act," available at <http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/upload/2006irg-report.pdf>. For waters placed in category 4c, an appropriate plan to address the pollution impairment is needed for such waters to be

waters for which a State pursues an alternative restoration approach to achieve WQS shall remain on the CWA 303(d) list (i.e., Category 5) and still require TMDLs until water quality standards are attained. Taking into account the severity of the pollution and the uses of waters on the CWA 303(d) list, such waters might be assigned lower priority for TMDL development as alternatives expected to achieve water quality standards are pursued in the near term.

Recognizing that the statutory and regulatory obligation to develop TMDLs remain for waters on the CWA 303(d) list, EPA expects that States will only pursue alternative restoration approaches expected to achieve WQS more rapidly than pursuing a TMDL approach in the near term. Therefore, States should consider how long waters have been on the CWA 303(d) list. In addition, States should periodically evaluate alternative restoration approaches to determine if such approaches are still expected to achieve WQS more rapidly than pursuing a TMDL approach.⁵ If not, States should re-evaluate whether a higher priority for TMDL development should be assigned.

Description of an alternative restoration approach pursued for CWA 303(d) listed waters

EPA and States will work together to determine which is the most effective tool to achieve water quality standards more rapidly—be it TMDL development or pursuing an alternative restoration approach in the near term⁶—for waters that remain on the CWA 303(d) list. EPA expects States to demonstrate how an alternative restoration approach is expected to achieve water quality standards more rapidly than pursuing a TMDL approach in the near term (and thereby, warranting lower priority for TMDL development for the listed water). To assist States in determining whether an alternative restoration approach is appropriate for a particular water, EPA recommends that States consider the following circumstances associated with the listed water:

- 1) There are unique local circumstances (e.g., the type of pollutant or source or the nature of the receiving waterbody; presence of watershed groups or other parties interested in implementing the alternative restoration approach; available funding opportunities for the alternative restoration approach) that provide an opportunity to achieve water quality standards more rapidly.
- 2) Initial review of the pollutant or cause of impairment shows that particular point or non-point sources are responsible for the impairment with clear mechanisms to address all sources (both point and nonpoint), as appropriate (e.g., CWA 319 nine-element watershed-based plans or other restoration plans; source water protection plans; setting new limits when permit is re-issued, which alone or in combination with other actions, is expected to achieve WQS in the listed water, among others).

counted under program measure WQ-27. See also Section 5 of this document, “*Clarification on the assessment and assignment of waters to Category 4C.*”

⁵ As part of reporting progress under the CWA 303d Program performance measures WQ-27 and WQ-28, for EPA to continue reporting an alternative restoration approach under the measures, a State should demonstrate by 2022 that such an approach is on track to achieving WQS more rapidly than pursuing a TMDL approach in the near-term, by showing steady and continuing improvements in water quality or adequate progress in implementing the plan.

⁶ Throughout this document, alternative restoration approach or alternative approach means a plan, or description, of actions pursued in the near-term that in their totality are expected to attain water quality standards more rapidly than pursuing the TMDL approach in the near term.

- 3) Presence of stakeholder and public support for the alternative restoration approach, which is important for achieving timely progress in implementing the alternative, and thus achieving WQS more rapidly than pursuing a TMDL approach in the near term.

When a State decides to pursue an alternative restoration approach for impaired waters, EPA requests that the State provide, or reference, in its Integrated Report a description⁷ of the approach to show how the alternative approach is expected to meet water quality standards and how it is more immediately beneficial or practicable than pursuing a TMDL approach in the near term, in achieving WQS. Such description will help facilitate stakeholder engagement and support. It will also provide transparency to the public on why the State believes that the alternative restoration approach is expected to achieve WQS more rapidly than pursuing a TMDL approach, and why the affected listed water may warrant lower priority for TMDL development in the near term. In addition, the description will help facilitate State and EPA discussions on whether EPA will report the alternative restoration approach under the EPA CWA 303(d) program measures.⁸

To assist the States in demonstrating that the alternative approach is expected to meet water quality standards more rapidly than pursuing a TMDL approach in the near term, EPA offers some elements for a State to consider, as appropriate:

- Identification of specific impaired water segments or waters addressed by the alternative restoration approach, and identification of all sources contributing to the impairment.
- Analysis to support why the state believes that the implementation of the alternative restoration approach is expected to achieve water quality standards.
- An Action Plan or Implementation Plan to document: a) the actions to address all sources—both point and nonpoint sources, as appropriate—necessary to achieve WQS (this may include e.g., commitments to adjust permit limits when permits are re-issued or a list of nonpoint source conservation practices or BMPs to be implemented, as part of the alternative restoration approach); and, b) a schedule of actions designed to meet water quality standards with clear milestones and dates, which includes interim milestones and target dates with clear deliverables.⁹
- Available funding opportunities to implement the alternative restoration plan.
- Identification of all parties committed, and/or additional parties needed, to take actions that are expected to meet WQS.

⁷ A State may not need to develop a separate description of the alternative restoration approach for purposes of the CWA 303(d) program, if there is existing documentation that adequately describes such approach. A State may use such existing description, along with any supplemental information, to show how the alternative approach is expected to meet water quality standards, how it is more immediately beneficial or practicable in achieving WQS, than pursuing a TMDL approach in the near term, and to which waters the alternative restoration approach applies.

⁸ See WQ-27 and WQ-28 at http://water.epa.gov/resource_performance/planning/FY-2015-National-Water-Program-Guidance.cfm

⁹ As part of the adaptive management approach to addressing the impairment, EPA expects specific dates may be modified during implementation. The schedule will demonstrate how the planned actions will reduce the loadings from sources to achieve water quality standards. For instance, if BMPs are known, please include them in the description of the alternative restoration approach.

- An estimate or projection of the time when WQS will be met.¹⁰
- Plans for effectiveness monitoring to: a) demonstrate progress made toward achieving water quality standards following implementation; b) identify needed improvement for adaptive management as the project progresses, and, c) evaluate the success of actions and outcome.
- Commitment to periodically evaluate the alternative restoration approach to determine if it is on track to achieve WQS more rapidly than pursuing a TMDL approach, and if the impaired water should be assigned a higher priority for TMDL development.

The State's description of its alternative restoration approach is likely to be case-specific. The degree to which the above elements are addressed in the description is likely to depend on State consideration of numerous circumstances, which include among others:

- a) severity of the pollution;
- b) uses of the impaired water;
- c) nature of the receiving waterbody;
- d) type of pollutants causing the impairment;
- e) relative mix of nonpoint and point source loadings; and/or
- f) nature of the sources of those loadings.

In addition, the description of the alternative restoration approach and the waters to which it applies should be included during public review of the draft CWA 303(d) list or Integrated Report,¹¹ so that the public has an opportunity to view the State's alternative restoration approaches and the assigned priority ranking for TMDL development for such waters. Additionally, because the Integrated Report and its public comment process occur every two years, States are encouraged to engage the public on the use of specific alternative restoration approaches and their descriptions, as they are developed.

Creation of a subcategory in Category 5 (i.e., 5-alternative) to report on alternative restoration approaches for CWA 303(d) listed waters

As noted above, impaired waters for which a State develops and pursues an alternative restoration approach that is expected to address the impairment more rapidly than pursuing a TMDL approach in the near term, shall remain on the CWA 303(d) list (i.e., Category 5) and still require TMDLs until water quality standards are achieved. EPA is creating a subcategory under Category 5—namely subcategory 5-alternative—as an organizing tool to clearly articulate which listed waters have such alternative approaches. Creating subcategory 5-alternative provides transparency to allow the public to understand where and why a State is pursuing alternative

¹⁰ The estimate or projection may be modified due to new information or experience learned from initial actions.

¹¹ When a state develops an alternative restoration approach for a water identified as impaired after a 303(d) list has been approved, it is expected that the state will place this water on the next Integrated Reporting cycle 303(d) list .

restoration approaches. In addition, this subcategory will facilitate tracking alternative restoration approaches in these CWA 303(d) listed waters in priority areas. However, placing waters for which a State is pursuing an alternative restoration approach in subcategory 5-alternative is optional for States.

Because waters for which alternative restoration approaches are pursued still remain on the CWA 303(d) list, EPA will not take action to approve or disapprove a State's alternative restoration approach under CWA 303(d). Therefore, as long as such waters with alternative restoration plans remain on the CWA 303(d) list, EPA's review of the list would not be affected or delayed by whether development of a TMDL or an alternative restoration plan is pursued.

EPA encourages States to work closely with EPA Regions when States decide to pursue and develop alternative restoration approaches. EPA will take into account a State's description of its alternative restoration approach to determine whether EPA believes it is appropriate for such waters to be in subcategory 5-alternative and whether to report such approaches under the EPA CWA 303(d) program measures. EPA does not expect that all of the activities or controls to carry out an alternative restoration approach must be fully implemented, or that water quality standards must have been achieved, before the alternative restoration approach can be reported as a plan under the CWA 303(d) program Measures. The restoration approach does need to clearly demonstrate how WQS will be achieved for EPA to report it under EPA CWA 303(d) program measures.

Distinction between Subcategory 5-alternative and Category 4b

Sub-category 5-alternative

- 1) This includes impaired waters on the CWA 303(d) list (i.e., Category 5 waters) for which a State has developed an alternative restoration approach to meet water quality standards.
- 2) These impaired waters shall remain on the CWA 303(d) list until water quality standards are achieved or a TMDL is developed. (See Figure 1.) Taking into account the severity of the pollution and uses, such waters might be assigned lower priority for TMDL development as alternative restoration approaches expected to meet water quality standards are pursued in the near term.
- 3) For these impaired waters, the State has decided not to pursue a demonstration that "other pollution control requirements" required are stringent enough to implement any water quality standard consistent with 40 CFR 130.7(b)(1)(iii).
- 4) As long as such waters remain on the CWA 303(d) list, EPA's review of the list would not be affected or delayed by whether a TMDL or an alternative restoration plan is pursued.
- 5) EPA will consider the adequacy of the State's description of the alternative restoration approach in determining whether to report such an approach under the EPA CWA 303(d) program measures.

Category 4b

- 1) As noted in the "Information Concerning 2008 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions,"¹² Category 4b includes

impaired waters for which a State has provided sufficient demonstration that there are other pollution control requirements sufficiently stringent to achieve applicable water quality standards within a reasonable period of time.

- 2) These impaired waters are not included in the State's CWA 303(d) list consistent with 130.7(b)(1)(iii) (Category 5). (See Figure 1)
- 3) EPA reviews and approves the exclusion of such waters from Category 5 consistent with CWA requirements.

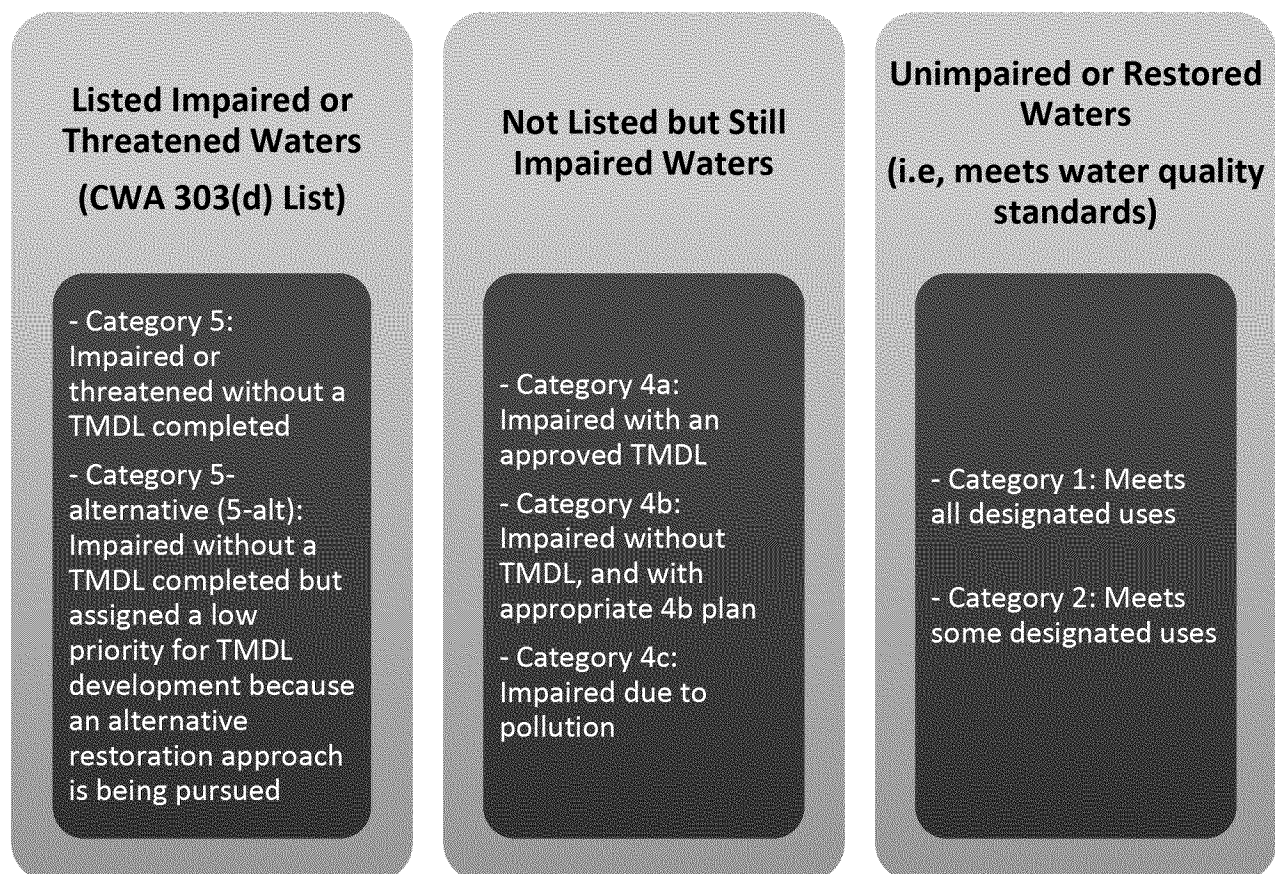


Figure 1: This figure identifies the category in which an impaired water will be placed when: 1) a TMDL is still needed; 2) a TMDL or Category 4b demonstration has been developed, or the impairment is due to pollution and not a pollutant; or, 3) it is now attaining water quality standards for assessed designated uses.

2. Continue identifying waters impacted by nutrients for the Section 303(d) list for States

¹² For more information on Category 4b, see "Information Concerning 2008 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions," available at http://www.epa.gov/owow/tmdl/2008_ir_memoandum.html.

without numeric nutrient water quality criteria

Addressing nutrient pollution in our nation's waters continues to be one of EPA's top priorities. In a March 2011 memorandum to the states, tribes and territories, EPA articulated the need for action by stating, "States, EPA and stakeholders, working in partnership, must make greater progress in accelerating the reduction of nitrogen and phosphorus loadings to our nation's waters." EPA commends the progress made since 2011; however, additional actions are needed nationwide, including efforts to identify nutrient-impaired waters in the absence of numeric nutrient criteria.

Identifying nutrient-impaired waters is an important step in a State's process to prioritize and accelerate nutrient reduction efforts. The CWA and EPA's implementing regulations require States to identify water-quality limited segments still requiring TMDLs where pollution controls are not stringent enough to meet any applicable water quality standard. Applicable water quality standards include designated use, water quality criteria (numeric and narrative), and antidegradation requirements.

To assist States with identifying nutrient-impaired waters, in the 2014 Integrated Reporting Guidance (IRG),¹³ EPA provided a number of examples of approaches that can be used for assessing whether waters are attaining nutrient-related narrative criteria and/or supporting designated uses. Collectively, the examples address a number of different designated uses, are based on causal and nutrient response parameters, and rely on various types of assessment information such as the evaluation of water column data against nutrient targets, and visual observations, field surveys, stressor identification analysis, biological information, and public feedback and comments. The 2014 IRG also provided recommendations to facilitate stakeholder input and EPA review of States' Section 303(d) lists, such as States describing in their assessment methods applicable data quantity, quality, and representativeness expectations for making water quality attainment determinations.

EPA continues to expect States to evaluate the status of their waters with respect to nutrient-related impairments and to add to their Section 303(d) list waters failing to meet any applicable water quality standard. For those States that have developed nutrient-related assessment methodologies, EPA encourages States to continually refine their nutrient-related assessment methodologies and to share them with neighboring States to collaboratively bolster nutrient assessment programs, as needed. For States without nutrient-related assessment methodologies, there is still a requirement to assemble and evaluate all existing and readily available water quality-related data and information against all applicable WQS to develop the Section 303(d) list. The examples in the 2014 IRG illustrate the flexibility States have to develop nutrient-related assessment methodologies for applicable water quality standards even before the adoption of numeric nutrient criteria.

3. Implementation of the Water Quality Framework: Assessment and Total Maximum Daily Load (TMDL) Tracking and Implementation System (ATTAINS)

¹³ Information Concerning 2014 Clean Water Act Sections 303(d), 305(b) and 314 Integrated Reporting and Listing Decisions available at <http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/2014-memo.cfm>.

A. Water Quality Framework

In 2014, EPA introduced the Water Quality Framework, which is a new way of integrating EPA's data and information systems (e.g., STORET/WQX, ATTAINS, NHDPlus, GRTS)¹⁴ to more fully support water quality managers. The Framework will streamline water quality assessment and reporting while providing a more complete picture of the nation's water quality. Benefits of this approach include:

- Reduces State burden by streamlining the Clean Water Act assessment and reporting process;
- Provides the means to tell the 'whole' story from monitoring to assessment to restoration;
- Links the broader context of national and statewide statistical surveys to the localized assessment decisions;
- Provides better measurement and reporting of water quality improvement;
- Provides more transparency in reporting water quality actions and supporting water quality decision making;
- Allows for tools that can be used to identify relevant monitoring data for water quality assessments;
- Supports State development of tools to automate the screening of monitoring data against water quality standards; and
- Connects data, decisions, and actions geospatially.

As discussed in the 2012 IR Memo,¹⁵ IR data include State water quality assessment decisions, attribute data, and the geospatial data representing the geographic locations of those assessed waters, as well as the results of statewide statistical surveys. This information is needed in order for EPA and the public to better understand the status of the nation's waters. EPA's ATTAINS database¹⁶ is the repository for State IR attribute data, and the Reach Address Database¹⁷ contains State IR geospatial data. EPA compiles State-submitted IR data to develop and publish the National Water Quality Inventory Report to Congress (CWA Section 305(b) Report), determine States' variable portion of the Section 106 grant allocation formula, inform water quality decisions, and to conduct national analyses with various stakeholders to help restore the nation's waters.

B. Water Quality Framework: ATTAINS Redesign

As discussed in the 2012 IR Memo,¹⁸ IR data include State water quality assessment decisions,

¹⁴ STorage and RETrieval Data Warehouse (STORET)/Water Quality Exchange (WQX); Assessment TMDL Tracking and Implementation System (ATTAINS); National Hydrography Dataset *Plus* (NHDPlus), Grants Reporting and Tracking System (GRTS)

¹⁵ *Information Concerning 2012 Clean Water Act Sections 303(d), 305(b) and 314 Integrated Reporting and Listing Decisions* available at http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/ir_memo_2012.cfm

¹⁶ Assessment and Total Maximum Daily Load (TMDL) Tracking and Implementation System (ATTAINS) available at <http://www.epa.gov/waters/ir>

¹⁷ Geospatial Data Downloads available at <http://www.epa.gov/waters/data/downloads.html>

¹⁸ *Information Concerning 2012 Clean Water Act Sections 303(d), 305(b) and 314 Integrated Reporting and Listing*

attribute data, and the geospatial data representing the geographic locations of those assessed waters. This information is needed in order for EPA and the public to better understand the status of the nation's waters. EPA's ATTAINS database¹⁹ is the repository for State IR attribute data, and the Reach Address Database²⁰ contains State IR geospatial data. EPA compiles State-submitted IR data to develop and publish the National Water Quality Inventory Report to Congress (CWA Section 305(b) Report), determine States' variable portion of the Section 106 grant allocation formula, inform water quality decisions, and to conduct national analyses with various stakeholders to help restore the nation's waters.

Under the Water Quality Framework, ATTAINS will be the first system to undergo changes. One of the overarching goals of this effort is for States and EPA to improve the timeliness of the Integrated Report submittals, as well as improve the timeliness for the review and approval or disapproval of the 303(d) list included in the Integrated Report. EPA recognizes that State resources to complete these actions are limited. Hence, both States and EPA need to continue to identify and apply best practices to provide timely information on the status of the nation's waters, including the State identification of waters under Section 303(d)(1)(A) of the CWA.

In 2013, EPA completed a retrospective review of the IR process and identified several opportunities for improvements. In particular, although the 2001 guidance encouraged electronic reporting, there continues to be a significant amount of paper reporting, which has resulted in a disconnect between the 'official' paper reports and the corresponding electronic data. In 2014, as part of the Water Quality Framework, a number of changes were identified to improve the IR process, with a specific focus on moving paper processes to electronic processes, where appropriate. This effort will also seek to enable the ATTAINS system to be a more valuable tool throughout the IR process, thereby reducing the time and costs for States and EPA in their respective roles in the water quality monitoring and assessment process through the use of automated processes, electronic reporting and review capabilities, and validation checks.

For ATTAINS, the Framework has scheduled activities to occur in two Phases:

- **Phase 1:** The 2016 IR cycle will serve as a pilot phase. Because the development for the system will not be completed until the spring of 2016, it is not expected that States will use the new system for their official 2016 IR submission to EPA, but may pilot the system, after their official submission, using their 2016 IR information to identify where additional improvements should be made in advance of the 2018 IR cycle. During the 2016 IR cycle, EPA will continue to support the data systems for tracking assessment decisions outlined in the 2014 IR memo.²¹
- **Phase 2:** The 2018 IR cycle²² will serve as the transition to the new ATTAINS for all

Decisions available at http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/ir_memo_2012.cfm

¹⁹ Assessment and Total Maximum Daily Load (TMDL) Tracking and Implementation System (ATTAINS) available at <http://www.epa.gov/waters/ir>

²⁰ Geospatial Data Downloads available at <http://www.epa.gov/waters/data/downloads.html>

²¹ *Information Concerning 2014 Clean Water Act Sections 303(d), 305(b) and 314 Integrated Reporting and Listing Decisions* available at <http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/2014-memo.cfm>

²² For the 2018 IR cycle, the new ATTAINS system will replace the existing NTTS and ADB systems, OWIR-ATT data flow that exists within the Exchange Network, as well as incorporate the ATTAINS Web Express system that is used for submitting data to EPA and entering state statistical survey summary information. This new system will provide one interface and data model for all of the integrated reporting and TMDL information.

States.

Please note, those data systems outlined in the 2014 IRG will no longer be supported beginning the summer of 2017. In addition, the EPA encourages States to utilize resources available to States under the Exchange Network.²³

C. Statewide Statistical Survey Data in ATTAINS

EPA continues to support both statewide statistical surveys and site-specific targeted monitoring to cost-effectively track water quality conditions in State waters and promotes use of both to meet the reporting requirements under CWA Sections 303(d) and 305(b). For the 2016 IR cycle, EPA will again seek to incorporate statewide statistical survey findings reported to EPA into the state-level water quality summaries displayed on the ATTAINS website and to use both survey and site-specific results in its national water quality summary. To assist States with reporting statewide statistical survey data results to EPA, the statewide statistical survey web data entry tool is available at: <https://attainsweb.epa.gov>.

4. Use of Water Quality Impairment Data to Update the Variable Portion of the Fiscal Year 2017 Clean Water Act Section 106 Grant Allocation Formula

The CWA Section 106 regulations (40 CFR Part 35.162) set out the allocation formula for grants to States and interstate compact commissions. The CWA requires EPA to allocate funds to States “on the basis of the extent of the pollution problem in the respective states.” The formula includes a base and six variable components. The variable components of the CWA Section 106 grant allocation formula currently include: surface water area, ground water use, point sources, nonpoint sources, water quality impairment, and population of urban areas. Water quality impairment accounts for 35% of the variable portion.

The data in the CWA Section 106 grant allocation formula will be updated in calendar year 2016 for use in the Fiscal Year 2017 Section 106 grant allocation. The water quality impairment variable component of the CWA Section 106 grant allocation formula will be included in this update. The water quality impairment data includes: river and stream miles; lake, pond, and reservoir acres; estuary square miles; ocean shoreline miles; wetland acres; and Great Lake shoreline miles (40 CFR Part 35.162 Table 1). To support the formula data update, EPA will use the most current and complete assessment results from States available to the public in ATTAINS. For each of the 6 waterbody types designated as the water quality impairment component of the Section 106 grant allocation formula, EPA will use the data source that represents the most comprehensive designation of impaired waters including Integrated Report categories 4a, 4b, 4c, 5, 5-alt, and 5m; separate 305(b) report categories “not supporting” or “impaired;” or statewide statistical survey result categories included in the State’s definition of “not supporting” or “impaired.” For State water quality impairment data to be used in the CWA Section 106 grant allocation formula, the data needs to be available to the public in ATTAINS by September 1, 2016.

5. Clarification on the assessment and assignment of waters to Category 4C

²³ For additional information about the Exchange Network, visit <http://www.exchangenetwork.net/>

As the nation's waters face an increasing degree of stress from anthropogenic influences, as well as unpredictable stress from the effects of climate change and extreme weather events, it will become important to more fully understand the impacts and causes of all types of pollution on our nation's waters. While the focus of previous IR Guidance has predominantly been on the assessment and listing of impairments caused by pollutants and waters assigned to Category 5 (i.e., a State's Section 303(d) list of impaired and threatened waters needing a TMDL), the assessment and categorization of impairments caused by pollution²⁴ not caused by a pollutant have not been covered as extensively. However, the effects of such pollution can be significant, including the effects of hydrologic alteration²⁵ or habitat alteration. A 2010 study by the U.S. Geological Survey²⁶ found that anthropogenic hydrologic alteration is extensive in the U.S. and may be the primary cause of ecological impairment in river and stream ecosystems. Examples of such alteration could include water withdrawals, impoundments, or extreme high flows that scour out stream beds, destabilize stream banks and cause a loss of habitat. Climate change is expected to only exacerbate these effects. Recognizing the interdependency and interrelatedness between pollutants and pollution, EPA encourages States to more fully monitor, assess, and report the impacts of all types of pollution, thereby improving the opportunities for increasing resilience and restoration of these waters. To assist States with this effort, EPA is clarifying previous guidance about the assessment and categorization of waters into Category 4C when a State demonstrates that the failure to meet an applicable water quality standard is not caused by a pollutant, but instead is caused by other types of pollution.²⁷

Assessment of waters impaired by pollution not caused by a pollutant

It is important to recognize that a water body segment is considered impaired when the applicable water quality standards²⁸ are not met or not expected to be met (i.e., threatened). States typically focus assessments on determining whether narrative or numeric water quality criteria are met. When assessing for impacts caused by hydrologic or habitat alteration, States can assess whether the narrative criteria are met, for example, by using a biological narrative²⁹ or

²⁴ Defined under the CWA as “the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water” (Section 502(19))

²⁵ In discussing causes that contribute to the actual or threatened impairment of a designated use in a waterbody, EPA defines “flow alteration” as “frequent changes in flow or chronic reductions in flow that impact aquatic life” U.S. EPA, *Guidelines for Preparation of the Comprehensive State Water Quality Assessments (305(b) Reports) and Electronic Updates*, EPA Doc. No. 841-B-97-002A, 4-14 (1997). Hydrologic alteration is the current term in the state of the science for flow alteration, which also now includes impacts to aquatic life as well as recreation, drinking water, etc.

²⁶ Carlisle, Wolock and Meador, “Alteration of stream flow magnitudes and potential ecological consequences: a multiregional assessment,” *Front Ecol Environ* 2010; doi:10.1890/100053.

²⁷ See U.S. EPA, *Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act*, available at http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/2006IRG_index.cfm

²⁸ EPA's 303(d) listing regulations at 40 CFR § 130.7(b)(3) define a “water quality standard applicable to such waters” and “applicable water quality standards” as “those water quality standards established under section 303 of the Act, including numeric criteria, narrative criteria, waterbody uses and antidegradation requirements.” Also see, *Information Concerning 2014 Clean Water Act Sections 303(d), 305(b) and 314 Integrated Reporting and Listing Decisions* available at <http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/2014-memo.cfm>

²⁹ For instance, several states have biological narratives that require an aquatic ecosystem to support and maintain a balanced and indigenous community of organisms, having species composition, diversity, population densities and

evaluating numeric criteria using flow numeric criteria.³⁰ However, EPA recognizes that it is possible to have an impaired or threatened designated use that may not be determined through the assessment of available numeric and narrative criteria alone.³¹ For example, if a perennial stream is dry or has no flow and field staff are not able to collect a sample to measure physical, chemical, or biological parameters, then assessment of the designated use based solely on the sample results of an evaluation of narrative or numeric criteria may not be possible. However, data or information based on visual observations of no water in a perennial stream would be information on the physical condition of the stream, and would demonstrate the aquatic life or recreational use is most likely not being attained and a State may conclude that the designated use is impaired. Therefore, in some situations, States may be able to ascertain if a designated use is impaired, or even eliminated, in the absence of physical, chemical, or biological samples that are taken in the field.

As stated in the cover memorandum of the 2006 IR Guidance, “Each IR will report on the water quality standards attainment status of all waters, document the availability of data *and information* for each water, identify certain trends in water quality conditions and provide information to managers in setting priorities for future actions to protect and restore the health of our nation’s aquatic resources.” (Emphasis added). While States often rely on monitoring data, it is also important to note that EPA encourages States to evaluate all existing and readily available data *and information* when determining the attainment status of a water in order to determine if there is an impairment of a designated use due to pollution not caused by a pollutant. Data *or information* documenting significant hydrologic or habitat alteration could be used to make a use attainment decision for an impairment due to pollution not caused by a pollutant and should be collected, evaluated, and reported as appropriate.

There are many types of information that could be readily relied upon to identify threatened or impaired waters. This could include basic visual assessments of habitat alteration or flow alteration by field personnel. For instance, some States already report on “flow severity,” an observation on the presence of no flows, low flows, stand-alone pools, or extreme high flows. In addition to field information, States may already have access to, and rely on, other readily available information, such as USGS StreamStats, gage data, remote sensing, dam inventories or land use analysis.³² Even when this information may indicate a potential impairment of the designated use, States may not be using this information for use attainment decisions. The use of these data sources to document changes to the flow regime over time could independently

functional organization similar to that of reference conditions. Such narratives can evaluate whether the hydrology or habitat needed to support those requirements is present.

³⁰ As of 2014, ten states and six tribes with Treatment as a State status have adopted flow criteria.

³¹ See Wilcher, LaJuana, EPA to Cashell, Lois, FERC. (January 18, 1991), for EPA’s interpretation of protecting water quality beyond only criteria; Also see, *Information Concerning 2014 Clean Water Act Sections 303(d), 305(b) and 314 Integrated Reporting and Listing Decisions* available at <http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/2014-memo.cfm>

³² See U.S. EPA, *Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act*, available at http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/2006IRG_index.cfm for a further discussion with additional information types to be considered. Appendix L of the 1997 305(b) Guidelines includes example types of information for source categories specifically for hydromodification, modeling analysis using PHABSIM or other instream flow models to document adverse impacts. U.S. EPA, *Guidelines for Preparation of the Comprehensive State Water Quality Assessments (305(b) Reports) and Electronic Updates*, EPA Doc. No. 841-B-97-002A. (1997).

indicate designated use impairment by pollution not caused by a pollutant. In fact, States may already be using some of this information but not reporting it. In some cases, remote observations of gage data may have led States to not travel to a site when there were extreme conditions or, alternatively, to travel to a site, but not collect any data or information. Where States did not travel to a site, no data *or information* would have been captured to document the stream condition. Where States did travel to a site but could not sample, States may have simply recorded “no data” or “more information needed” in site visit records because they could not obtain physical, chemical or biological sampling data. Therefore, the EPA recommends that, when possible, States collect and report information relevant to whether the designated use is impaired or threatened even when chemical, physical, or biological field samples cannot be obtained. This will allow managers to be more fully informed for setting priorities and developing plans for restoration of these waters.

Categorization of waters impaired by pollution

EPA continues to recommend that States assign all of their surface water segments to one or more of five reporting categories.³³ Regarding waters impaired by pollution not caused by pollutants, EPA encourages States to use data and information to assign waters consistent with the category descriptions below. If pollution impairment is identified, EPA continues to expect regular monitoring to occur when samples can be collected and continued identification of potential pollutant impairments for listing in Category 5.

Category 3 Assessment units should be reported here when there are not enough data and information to determine if water quality standards are impaired. This category should not be used when data or information is available about impairments due to pollution not caused by a pollutant, including for instance, where hydrologic alteration or impacts from habitat alteration impairs a designated use but no narrative or numeric water quality criteria can be assessed; such waters should be placed in Category 4C.

Category 4C If the States have data and/or information that a water is impaired due to pollution not caused by a pollutant (e.g., aquatic life use is not supported due to hydrologic alteration or habitat alteration), those causes should be identified as such and that water should be assigned to Category 4C. Examples of hydrologic alteration may include the following: a perennial water is dry, no longer has flow, has low flow, has stand-alone pools, or extreme high flows or there is any other type of alteration of the frequency, magnitude, duration or rate-of-change of natural flows in a water; or a water is characterized by entrenchment, bank destabilization, or channelization. EPA recommends that, where circumstances such as unnatural low flow, no flow or stand-alone pools prevent sampling, it would most likely be appropriate to place that water in Category 4C for impairment due to pollution not caused by a pollutant. In order to simplify and clarify the identification of waters impaired by pollution not caused by a pollutant, States may create sub-categories in Category 4C to distinguish such waters. While TMDLs are not required for waterbody impairments assigned to Category 4C, States can employ a variety of watershed restoration tools and approaches to address the source(s) of the impairment.

³³ See U.S. EPA, *Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act*, available at http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/2006IRG_index.cfm

Category 5 If the States have data and/or information that a water is impaired due to a pollutant, it should be reported in Category 5. This is true even if this segment is also in Category 4C for an impairment due to pollution not caused by a pollutant. In that case, the State should list that water in Category 5 and identify the pollutant causing the impairment (e.g., nutrients) and should also indicate the nature of the pollution (e.g., hydrologic alteration) as a cause of impairment under Category 4C. If the water is later delisted for the pollutant (e.g., nutrients), but pollution (e.g., hydrologic alteration) is still impairing the water's use, then the water should remain in Category 4C. Consistent with previous IR Guidance, if a waterbody is impaired or threatened, and the State does not have data or information on whether a pollutant is causing the impairment, States should assign such waters to Category 5.³⁴ If assessment of new data and information subsequently demonstrates that the impairment is not associated with a pollutant and is due to pollution not caused by a pollutant, the waterbody-pollutant combination would no longer need to be assigned to Category 5 and may be placed into Category 4C.

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³⁴ Ibid.

Appendix A – Considerations for setting State long-term priorities from 2016 to 2022

Consistent with the CWA 303(d) Program Vision, EPA expects each State to establish long-term CWA 303(d) priorities from 2016 to 2022 in the context of its broader, overall water quality goals. The CWA 303(d) Program is able to integrate other programs because it translates State water quality standards into pollution reduction targets for the point source permitting and nonpoint sources management programs as well as other programs outside the CWA. Linking the CWA 303(d) Program priorities with those of other programs could aid in strategically focusing limited State resources to address priority waters through water quality assessments, TMDL or alternative restoration approaches, water quality protection strategies, implementation actions and/or follow-up monitoring.

EPA expects that a State will consider various factors—ranging from public interest, environmental considerations as well as resource implications, in addition to the statutory factors of severity of the pollution and uses of impaired waters—to inform its priority setting consistent with the Vision. These factors may include, among others:

- number, extent and age of listing of segments on a State CWA 303(d) list;
- number of waters affected by a particular pollutant or impairment on a State CWA 303(d) list;
- proximity of listed waters to each other within a watershed;
- relative significance of the environmental harm, public health risk, or threat of the impaired waters based on severity of the impairment, results of state-wide probabilistic surveys, National Aquatic Resource Surveys, vulnerability of the aquatic resource, or other appropriate information;
- specific regional and national priorities;
- degree to which CWA 303(d) Program could be integrated with other programs such as water quality standards, nonpoint source management, monitoring, NPDES (including programmatic needs for wasteload allocations for permits that are coming up for revisions or for new or expanding discharges) and source water protection programs, to achieve those environmental results;
- particular pollutants, waters or designated uses of primary interest to the public;
- likelihood of success in restoring impaired waters;
- technical and data considerations such as availability of monitoring data or models; number and relative complexity of the TMDLs; or,
- number and extent of healthy waters identified for planning and protection.

Each State has the flexibility in considering these and other appropriate factors in its prioritization. The consideration of these factors will be state-specific, and are likely to be shaped by what is important to its public and what resources and information are available to the State. As such, EPA anticipates that the extent to which these and other appropriate factors are addressed in the rationale submitted with the CWA 303(d) priorities in the Integrated Report, will be unique to each State. As noted earlier, in addition to explaining how the State arrived at the long-term priorities, the rationale for the CWA 303(d) priorities should also articulate the State plans to develop future TMDLs, alternative restoration approaches or protection plans and the extent to which they already exist in priority watersheds or water segments.

Notwithstanding this flexibility, EPA expects that States will identify priorities that reflect a meaningful plan (roadmap) on how best to meet their on-going CWA 303(d) Program requirements to address impaired waters over time. EPA plans to continue to work with States as they develop their CWA 303(d) Program priorities.

Additionally, recognizing there are different approaches to prioritizing waters, EPA offers several tools to assist States on prioritization. For example, EPA's Recovery Potential Screening Tool, available at www.epa.gov/recoverypotential, is useful for comparing restorability of impaired waters across various watersheds. Another tool from EPA is Waterscape, a GIS-based framework for identifying priority watersheds, wherein States choose the parameters and weigh the importance of each, and may compare various alternative prioritization scenarios. Also, the Nitrogen and Phosphorus Pollution Data Access Tool (NPDAT), at epa.gov/nutrientpollution/npdat, is a GIS-based tool designed to assist in identifying priority watersheds to address nutrient pollution.

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